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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/791,507

03/01/2004

Douglas C. Hittle

CSURF-112A

2758

28304

7590

01/22/2008

JEAN M. MACHELEDT

501 SKYSAIL LANE

SUITE B100

FORT COLLINS, CO 80525-3133

EXAMINER

WYROZEBSKI LEE, KATARZYNA I

ART UNIT

PAPER NUMBER

1796

MAIL DATE

DELIVERY MODE

01/22/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/791,507

Applicant(s)

HITTLE ET AL.

Examiner

Katarzyna Wyrozebski

Art Unit

1796

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 02 November 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) 8-16 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1-16 are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application
- ☐ Other: \_\_\_\_\_

***Election/Restrictions***

1. Claims 8-16 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected Group II and III, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 11/2/07.

***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 2, 6, 7 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by SALYER (US Re. 34,880).

Table in col. 3 discloses composition comprising following components: Binder (EPDM) 100 pbw, paraffin wax 33-66 pbw and aggregate 50 pbw. Aggregate in example is silica, however specification teaches use of other aggregates such as gravel, granite, limestone, quarts (which is also SiO<sub>2</sub>) and the like (col. 6 and 7). Mixtures of such aggregates are also enabled.

Rubbers or other polymeric materials are listed in col. 9 of SALYER. PCM of SALYER is described in detail in col. 4.

Some of the PCMs listed are high melting point waxes, which are considered solids. The prior art of SALYER also discloses that paraffins utilized comprise hydrocarbon chains having 16-21 carbon atoms with 17, 18, 19 and 20 comprising a major fraction. Therefore paraffins of SALYER include or comprise hydrocarbon having 18 carbons (col. 5). Since claims of the present invention discloses paraffins that comprise octadecane but are not limited to it, the prior art of SALYER reads on the paraffins of the present invention.

Composition of the prior art of SALYER is utilized to form construction and building material such as flooring, ceiling, wall as well as tile.

In the light of the above disclosure the prior art of SALYER anticipates claims rejected above.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 1-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over SALYER (US Re. 34,880) in view of CHEN (US 4,513,053).

The discussion of the disclosure of SAYLER from paragraph 3 of this office action is incorporated here by reference.

The difference between the present invention and the teachings of SALYER is recitation of microencapsulated PCM as well as a different way that a binder can be utilized in addition or in place of the rubbers of SALYER.

With respect to the above difference, the prior art of CHEN also discloses composition for construction materials such as floors, ceilings and walls. The composition of CHEN comprises PCM, which is microencapsulated.

The PCM material of CHEN is solid state PCM encapsulated by wall forming binder such as epoxy or polyester (col. 4).

Reason for microencapsulation of PCMs for following reasons: material can be packed into a bed through which heat exchange fluid passes, where the heat exchange fluid contacts the heat storing material. As a result thermal conductivity is improved and the thermal material separation is reduced. Depending on the type of the PCM further advantages may include minimized or completely obviated damages associated with phase change, long term reliability, efficient phase transfer and prevention of phase separation.

In the light of the above disclosure, it would have been obvious to one having ordinary skill in the art at the time of the instant invention to encapsulate wax of Chen in order to obtain all the advantages described in this discussion.

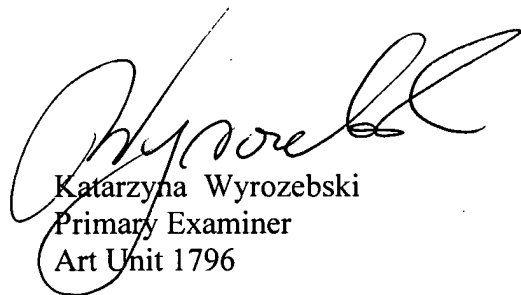
### ***IDS***

The examiner acknowledges the fact that the applicants have submitted IDS, before this office action has been issued. The examiner also appreciates courtesy copy of the IDS provided by the applicants. Since formal disclosure has not been scanned and response to instant applications is due, the examiner hereby issues office action. The IDS submitted by the applicant is hereby considered and it will be initialed, once scanned copy is made available.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Katarzyna Wyrozebski whose telephone number is (571) 272-1127. The examiner can normally be reached on Mon-Thurs 8:30 AM-2:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu can be reached on (571) 272-1114. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Katarzyna Wyrozebski  
Primary Examiner  
Art Unit 1796

January 16, 2008